

Date: Wednesday, 1/31/2007 2:38:51 PM  
 User: Kim Johnston

## Process Sheet

Customer	CU-DAR001 Dart Helicopters Services		Drawing Name	: BEARING		
Job Number	: 30520		Part Number	: D312123		
Estimate Number	: 10089		Drawing Number	: D3121 REV D		
P.O. Number	: N/A		Project Number	: N/A		
This Issue	: 1/31/2007 S.O. No. : N/A		Drawing Revision	: D		
Prsht Rev.	: NC		Material	: N/A		
First Issue	: N/A		Due Date	: 2/3/2007 Qty: 30 Um: Each		
Previous Run	: 30241					
Written By						
Checked & Approved By						
Comment	: Est. A: 04.02.19 New Issue KJ/DS					

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	PG	PURCHASING
-----	----	------------



Comment: PURCHASING

Issue P/O: 3024C 07/02/10 2

Bearing as per Dwg D3121

(30)

Possible Supplier: SKF P/N: 61900-2Z or KML P/N: 6900-ZZ

Material release note is required

2.0	6900ZZ	Bearing
-----	--------	---------



Comment: Qty.: 1 Each(s)/Unit Total : 30 Each(s)

Bearing

3.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------



Comment: PACKAGING RESOURCE #1

Receive &amp; Inspect for Transit Damage

Ensure Material Release Note is attached

4.0	QC6	DIMENSIONAL CHECK
-----	-----	-------------------



Comment: DIMENSIONAL CHECK

Inspect dimensions as per Dwg D3121 and attached certification Dwg Rev 1

5.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: 6C 07/02/14 (30)C 11/02/14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes  No  DQA:  Date: 07/02/14  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 1/31/2007 2:38:51 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BEARING

Job Number: 30520

Part Number: D312123

Job Number:



Seq. #: Machine Or Operation:

Description :

6.0 QC21

FINAL INSPECTION/W/O RELEASE



(30)

Comment: FINAL INSPECTION/W/O RELEASE

S 07/02/14

Job Completion



U 07-02-14

W/O:		WORK ORDER CHANGES				
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action      Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

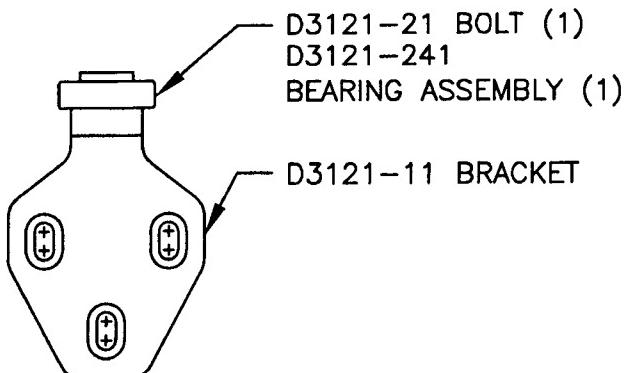
NOTE: Date & initial all entries

**DART**

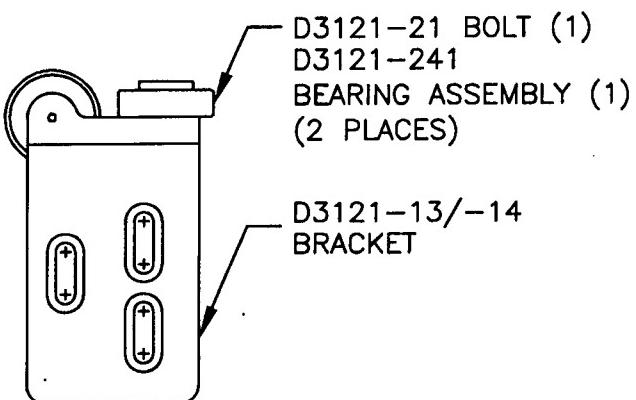
DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D3121
DATE		REV. D SHEET 1 OF 10
06.05.17		TITLE SCALE BRACKET ASSEMBLY 1:2
A	02.04.15	NEW ISSUE
B	03.01.16	ADD RIDGES; ADD MAT'L PROP; FIX P/N ADD -141/-143/-144/-145/-146
C	04.02.17	ADD CLEARANCE; USE -241 BEARING
D	06.05.17	D3121-25 CAP WAS 1.024, NOW 1.000

RELEASED

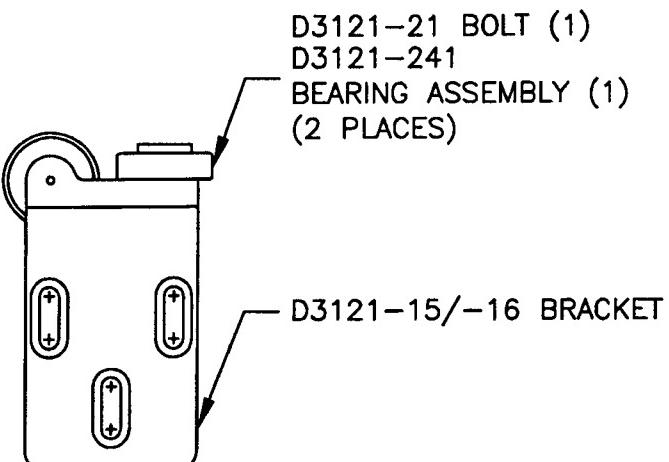
06.06.02

**D3121-041 BRACKET ASSEMBLY**

(REPLACES PREMIER P/N B30-23000-33)

**D3121-043 (SHOWN) / D3121-044 (OPPOSITE)  
BRACKET ASSEMBLY**

(REPLACES PREMIER P/N B30-23000-37/-38)

**D3121-045 (SHOWN) / D3121-046 (OPPOSITE)  
BRACKET ASSEMBLY**

(REPLACES PREMIER P/N B30-23000-35/-36)

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *30520*

Copyright © 2002 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

**DART**

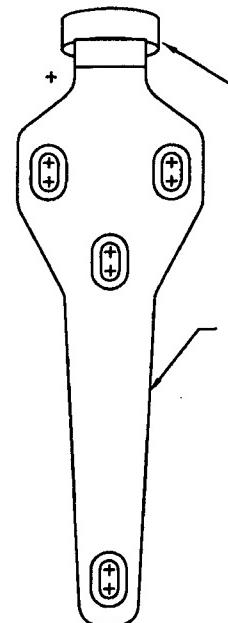
DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D3121
DATE	06.05.17	TITLE BRACKET ASSEMBLY

REV. D

SHEET 2 OF 10

SCALE

1:2

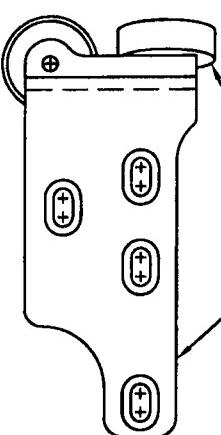


D3121-21 BOLT (1)  
D3121-241  
BEARING ASSEMBLY (1)

**D3121-141 BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23001-01)

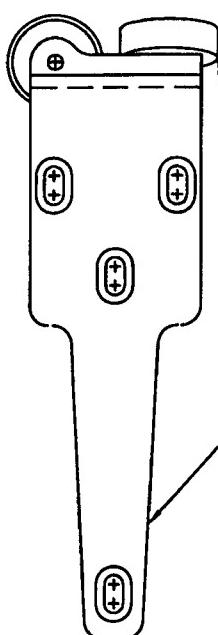
**RELEASED**

06.06.02



D3121-21 BOLT (1)  
D3121-241 BEARING ASSEMBLY (1)  
(2 PLACES)

**D3121-143 (SHOWN) / D3121-144 (OPPOSITE)**  
**BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-03/-04)



D3121-21 BOLT (1)  
D3121-241 BEARING ASSEMBLY (1)  
(2 PLACES)

**D3121-145 (SHOWN) / D3121-146 (OPPOSITE)**  
**BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-05/-06)

SHOP COPY  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 30520

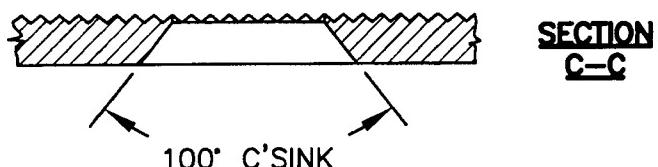
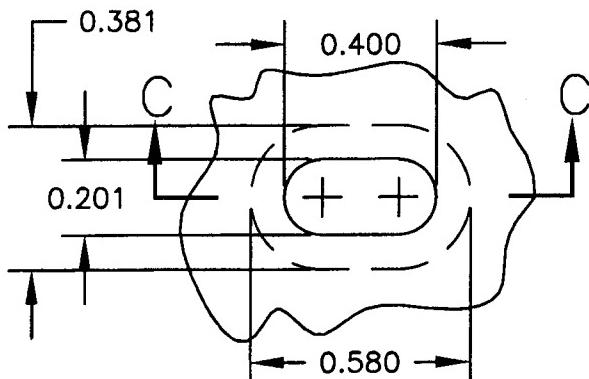
**Copyright © 2002 by DART AEROSPACE LTD**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

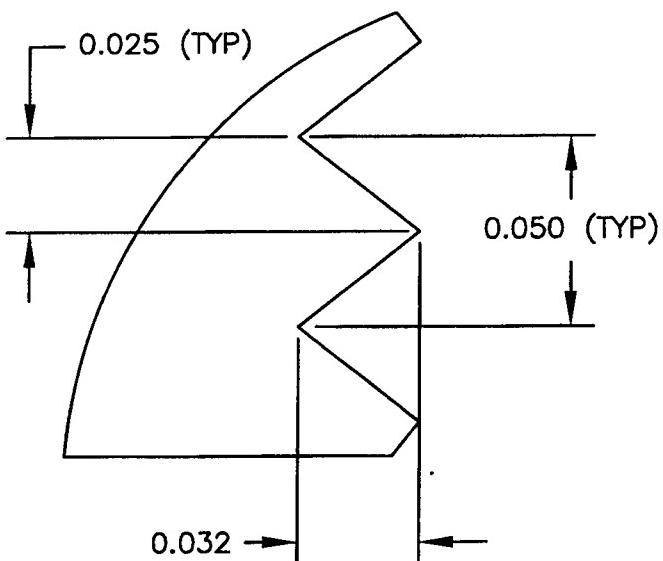
**DART**

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D3121
DATE		TITLE BRACKET ASSEMBLY
06.05.17		SCALE 1:1

**DETAIL A:**  
**SLOT DETAIL**  
SCALE 2:1  
VIEW ROTATED



**DETAIL B:**  
**RIDGE DETAIL**  
PARTIAL SECTION  
SCALE 1:20



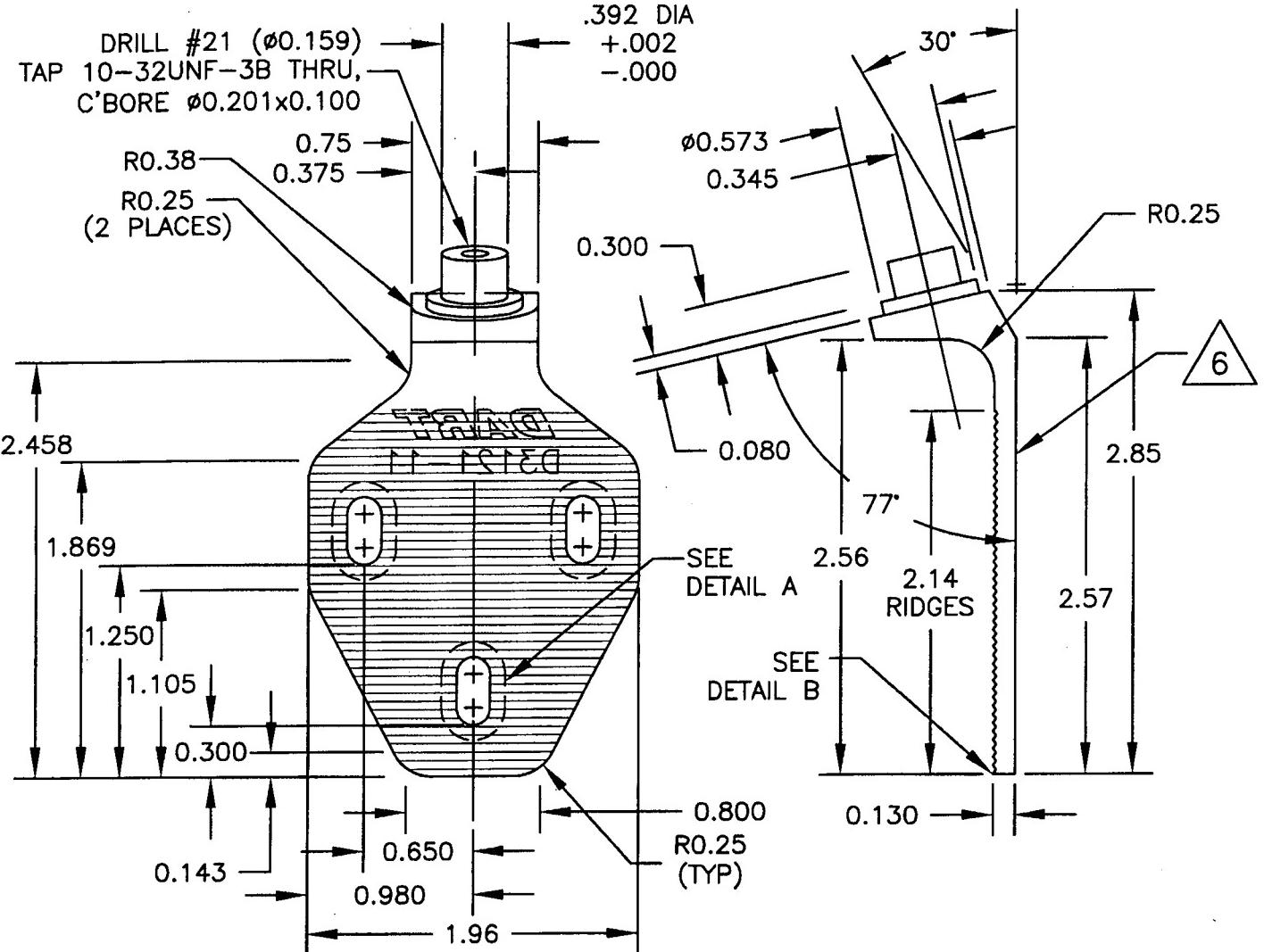
SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *30520*  
RELEASED  
*6.6.02* *[Signature]*

Copyright © 2002 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

**DART**

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. D
		D3121	SHEET 4 OF 10
DATE	TITLE	SCALE	1:1
06.05.17	BRACKET ASSEMBLY		

**D3121-11 BRACKET**

1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)

MIN ULTIMATE TENSILE = 150 ksi

MIN YIELD TENSILE = 100 ksi

2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

3) ALL DIMENSIONS ARE IN INCHES

4) BREAK ALL SHARP EDGES 0.005 TO 0.015

5) ENGRAVE DART P/N &amp; LOGO AS SHOWN

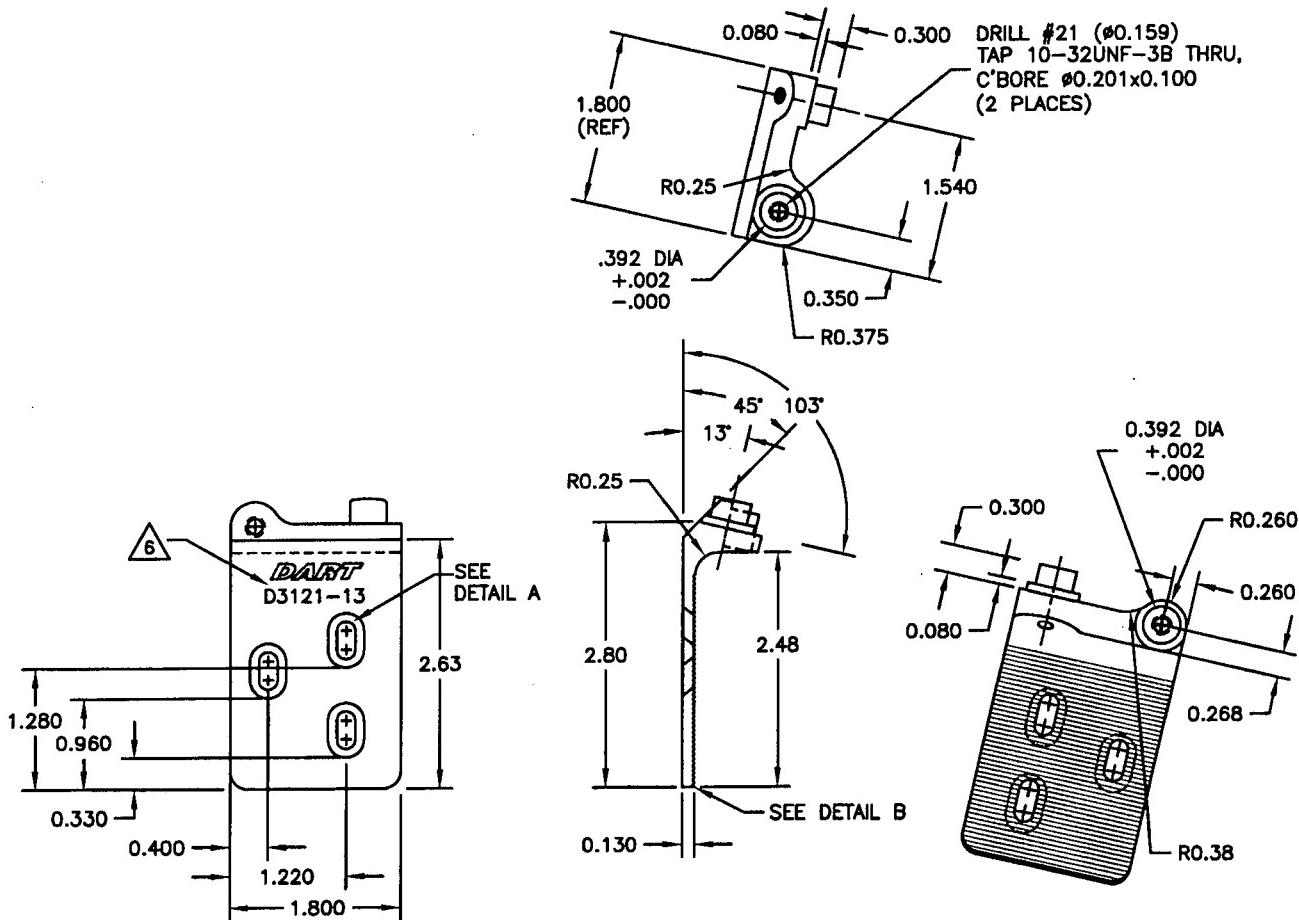
6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 30520

**RELEASED**06.06.02

**DART**

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. D
		D3121	SHEET 5 OF 10
DATE	06.05.17	TITLE	SCALE
		BRACKET ASSEMBLY	1:2

**D3121-13 BRACKET (SHOWN)****D3121-14 BRACKET (OPPOSITE)**

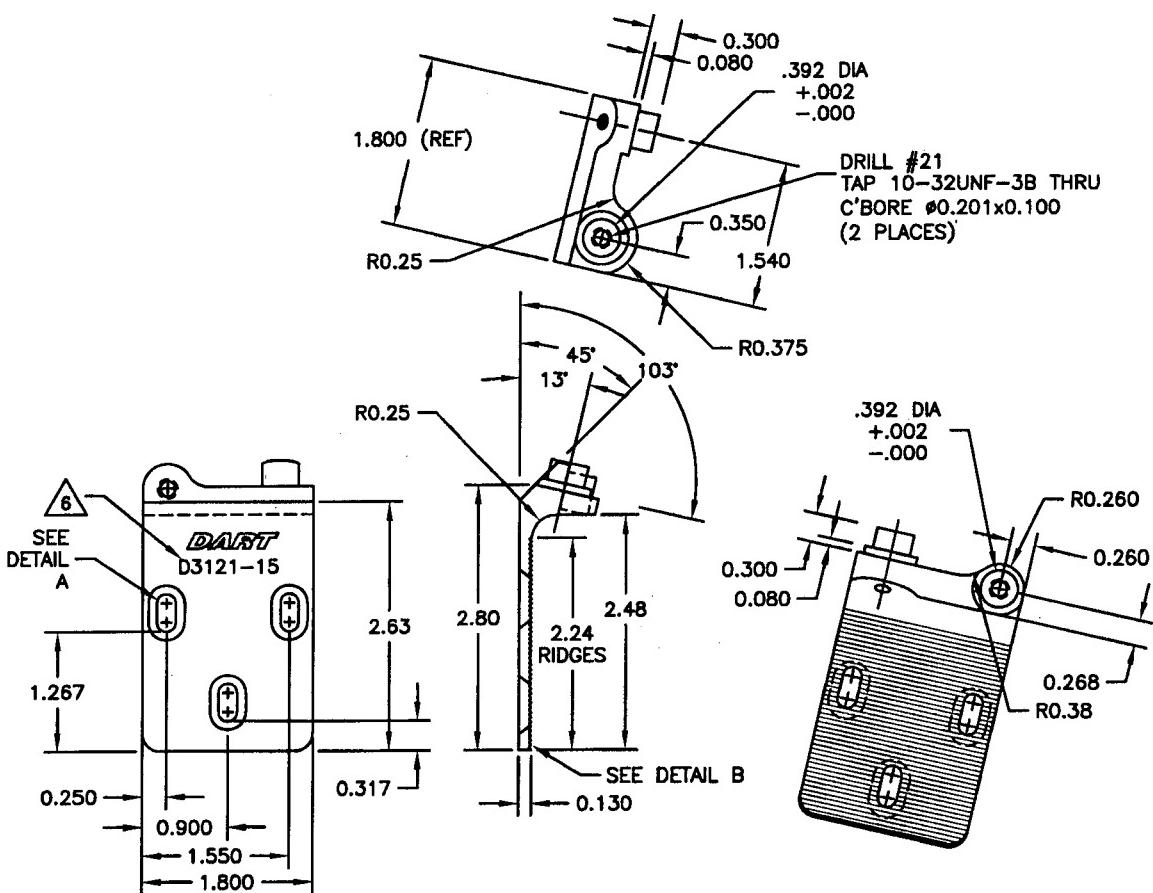
- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE STRENGTH = 150 ksi  
MIN YIELD TENSILE STRENGTH = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 30520

**RELEASED**06.06.02

**DART**

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D3121
DATE 06.05.17		SHEET 6 OF 10 TITLE SCALE 1:2 BRACKET ASSEMBLY

**D3121-15 BRACKET (SHOWN)****D3121-16 BRACKET (OPPOSITE)**

1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)

MIN ULTIMATE TENSILE = 150 ksi

MIN YIELD TENSILE = 100 ksi

2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

3) ALL DIMENSIONS ARE IN INCHES

4) BREAK ALL SHARP EDGES 0.005 TO 0.015

5) ENGRAVE DART P/N AND LOGO AS SHOWN

6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

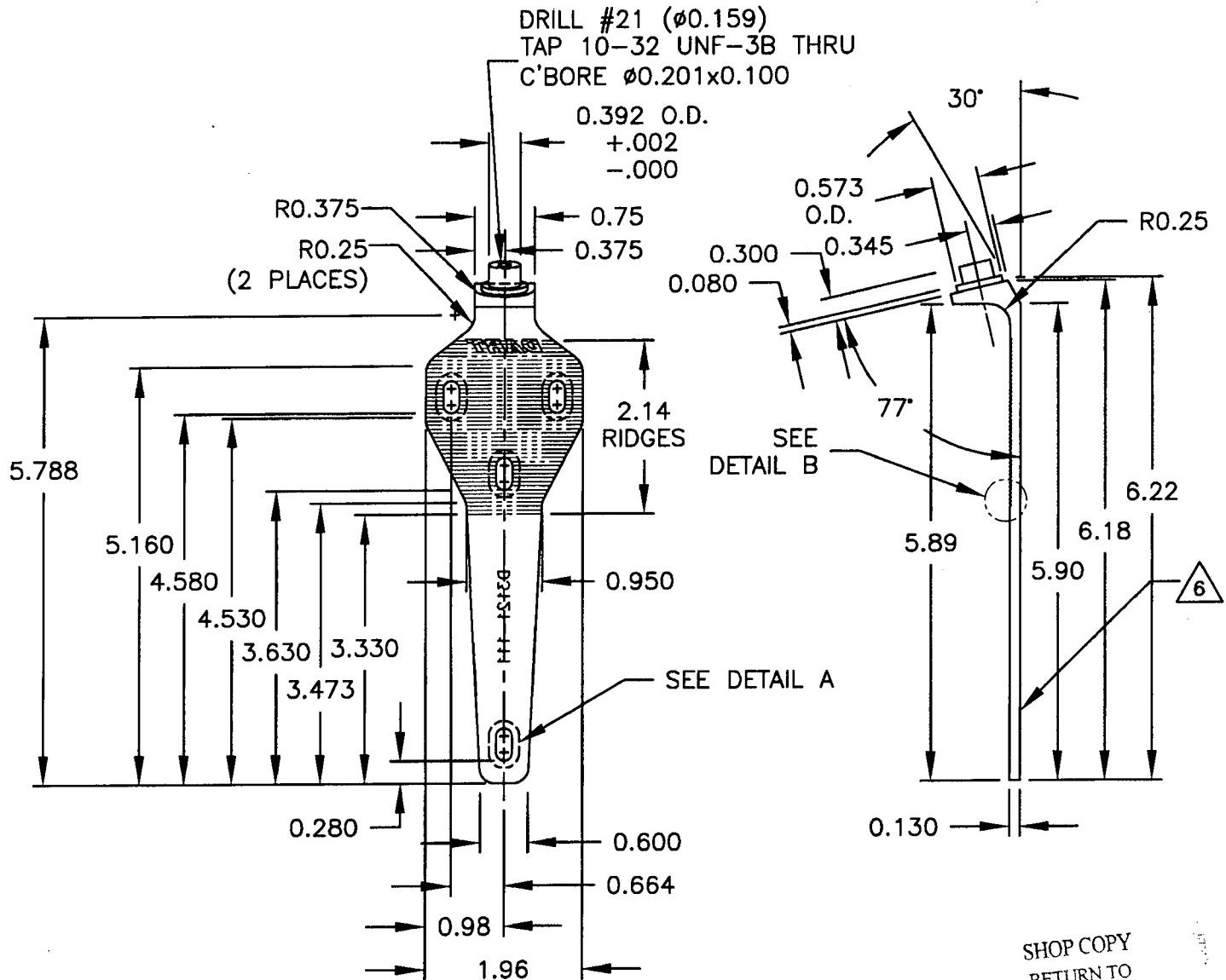
SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE

WORK ORDER  
NO. 30520

**RELEASED**06-06-02

## **DART**

DESIGN <i>CH</i>	DRAWN BY <i>CB</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKED <i>M.D.H.</i>	APPROVED <i>CH</i>	DRAWING NO. D3121	REV. D SHEET 7 OF 10	
DATE 06.05.17	TITLE BRACKET ASSEMBLY		SCALE 1:2	



**D3121-111 BRACKET**

- 1) REPLACES PREMIER P/N B32-23001-11
  - 2) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE = 150 ksi  
MIN YIELD TENSILE = 100 ksi
  - 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) ALL DIMENSIONS ARE IN INCHES
  - 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
  - 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
  - 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

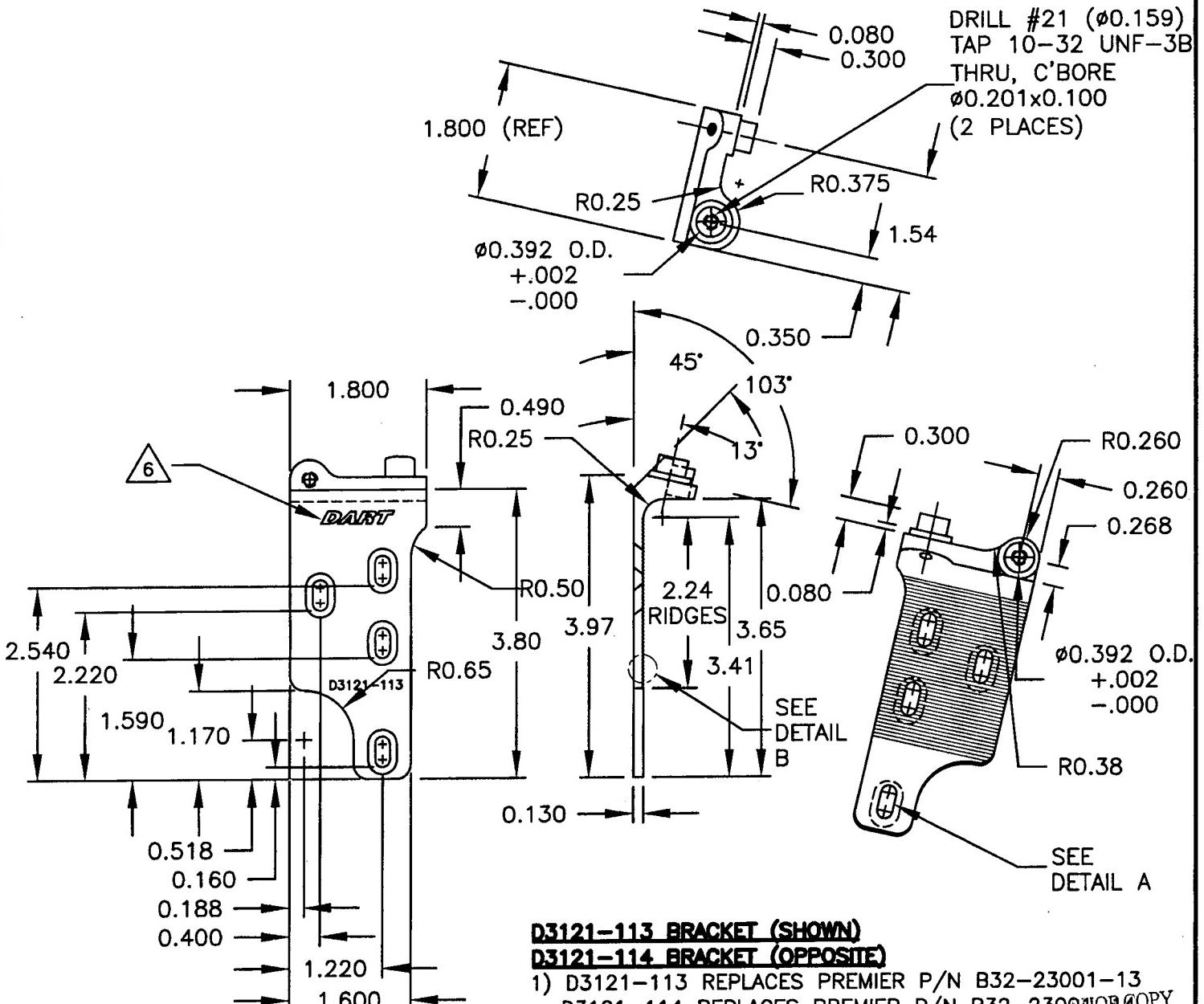
SHOP COPY  
RETURN TO  
ENGINEERING  
  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 30520

RELEASED

06-06-02 ~~11~~

**DART**

DESIGN 	DRAWN BY C.B.	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED 	APPROVED 	DRAWING NO. D3121	REV. D SHEET 8 OF 10
DATE 06.05.17	TITLE BRACKET ASSEMBLY	SCALE 1:2	



**D3121-113 BRACKET (SHOWN)**

**D3121-114 BRACKET (OPPOSITE)**

- 1) D3121-113 REPLACES PREMIER P/N B32-23001-13  
D3121-114 REPLACES PREMIER P/N B32-23001-14 COPY
  - 2) MATERIAL: 17-4 SS PER AMS 5604/5643 RETURN TO  
(REF DART SPEC. M17-4-B) ENGINEERING  
MIN ULTIMATE TENSILE STRENGTH = 150 ksi UNCOATED COPY  
MIN YIELD TENSILE STRENGTH = 100 ksi SUBJECT TO AMENDMENT
  - 3) TOLERANCES ARE PER DART QSI 018 UNLESS WITHOUT NOTICE  
OTHERWISE NOTED
  - 4) ALL DIMENSIONS ARE IN INCHES WORK ORDER  
30520
  - 5) BREAK ALL SHARP EDGES 0.005 TO 0.015 NO.
  - 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
  - 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

RELEASED

06.06.02

Copyright © 2002 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

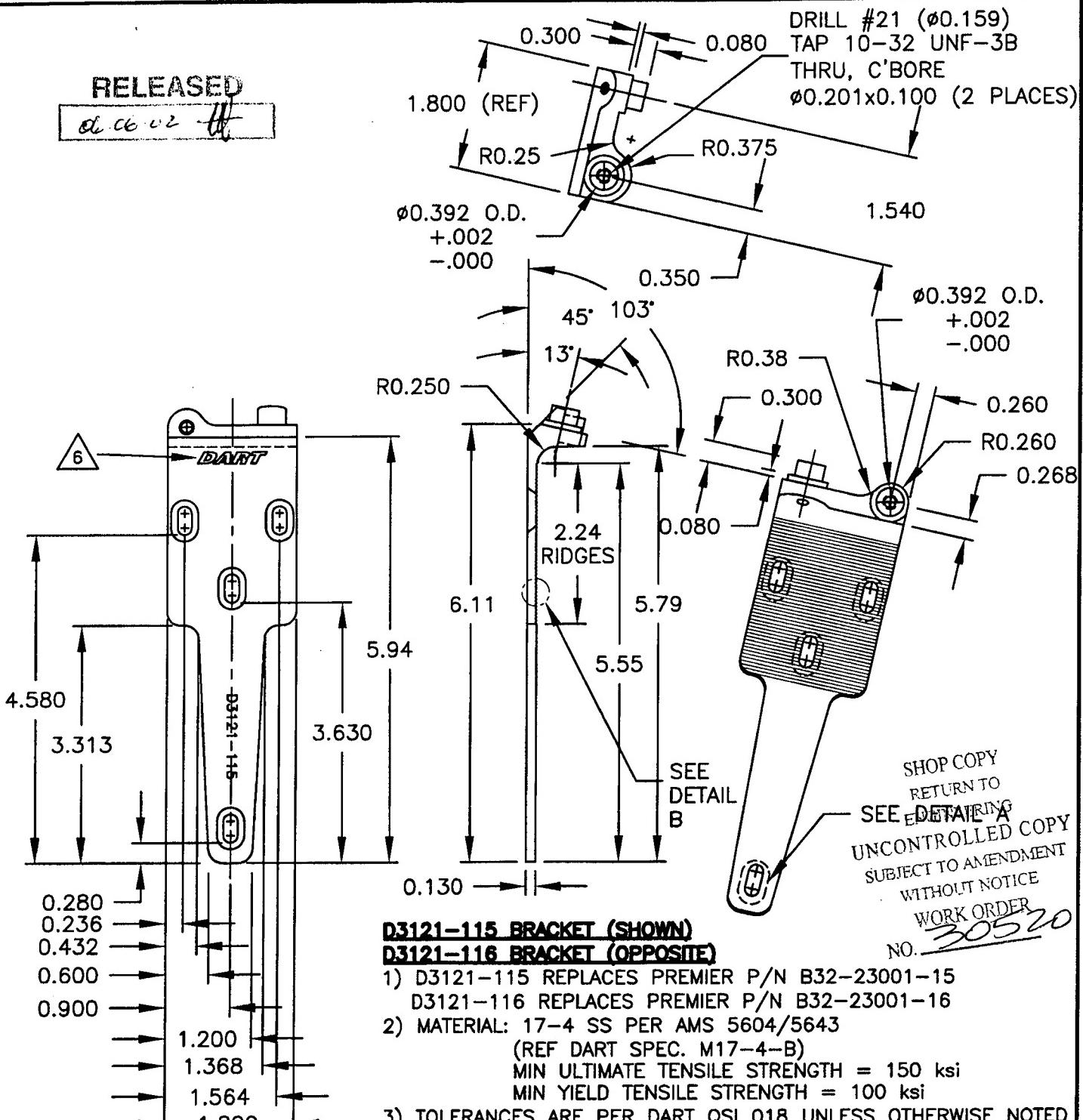
**DART**

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D3121
DATE		TITLE BRACKET ASSEMBLY
04.02.18		SCALE 1:2

REV. C  
SHEET 9 OF 10

RELEASED

01/06/02

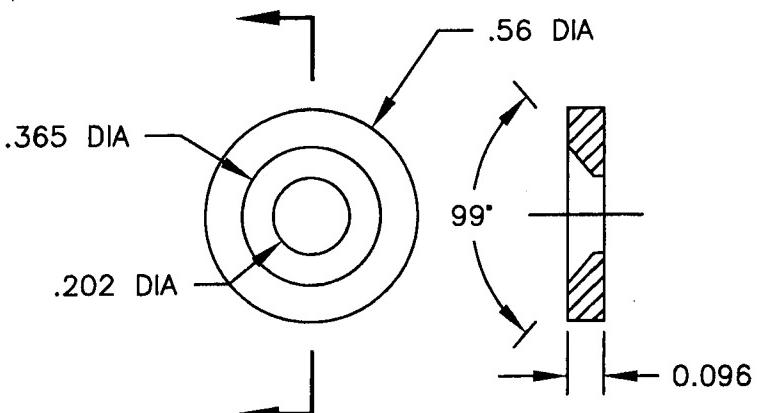


Copyright © 2002 by DART AEROSPACE LTD

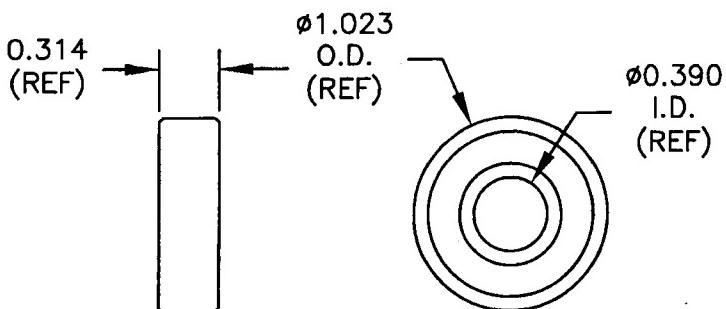
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

**DART**

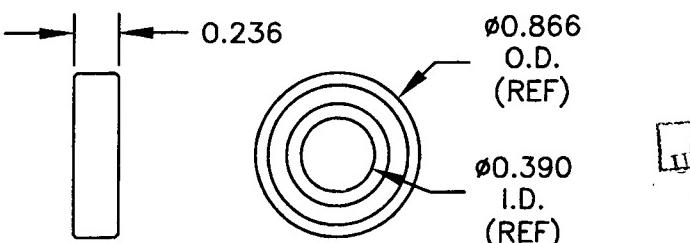
DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. D
DATE		D3121	SHEET 10 OF 10
06.05.17		TITLE	SCALE
		BRACKET ASSEMBLY	1:1

**D3121-17 WASHER (SCALE 2:1)**

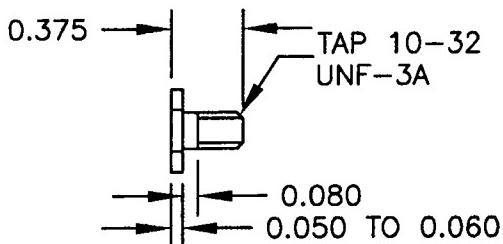
- 1) REPLACES PREMIER P/N B32-23001-17
- 2) MATERIAL: AISI 303 SS ROUND BAR, ANNEALED (REF DART SPEC. M303R)
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

**D3121-19 BEARING (SCALE 1:1)**

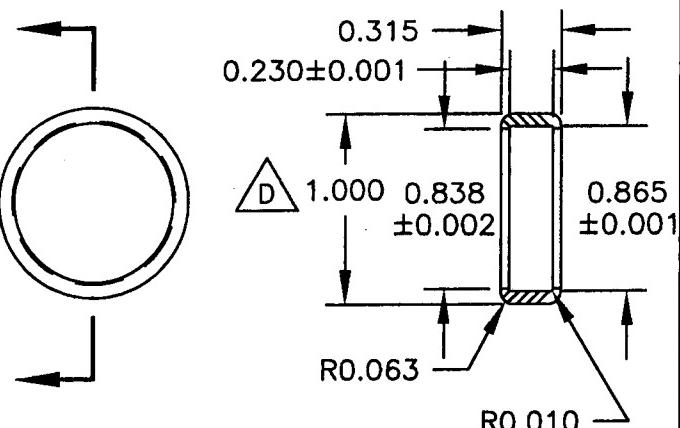
- 1) POSSIBLE SUPPLIER: KING BEARING P/N 6000-2ZJ/EM  
FAFNIR P/N 9100KDD
- 2) ALL DIMENSIONS ARE IN INCHES

**D3121-23 BEARING (SCALE 1:1)**

- 1) POSSIBLE SUPPLIER: SKF P/N 61900-2Z  
OR KML P/N 6900-2Z
- 2) ALL DIMENSIONS ARE IN INCHES

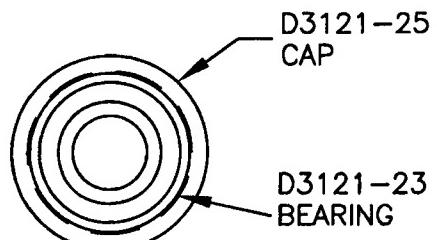
**D3121-21 BOLT (SCALE 1:1)**

- 1) MATERIAL: AISI 303 SS HEX, ANNEALED (REF DART SPEC. M303H0.500)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

**D3121-25 CAP (SCALE 1:1)**

- 1) MATERIAL: DELRIN ROD, Ø1.25 (REF DART SPEC. M-DELRIN-R1.250)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

SHOP COPY  
RETURN TO  
**RELEASED**  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 30520

**D3121-241 BEARING ASSEMBLY (SCALE 1:1)**

C/O GENERAL BEARING SERVICE INC.

# GENERAL BEARING SERVICE

www.gbs.ca

386 MAIN ST E, HAWKESBURY, ONTARIO K6A 1A8 (613) 632-9914

ORDER DATE: FEB 5, 2007

GST # R101979094

SOLD TO: DART AEROSPACE LTD.  
1270, ABERDEEN STREET  
HAWKESBURY, ON.

K6A-1K7

SALE MADE BY: PD  
SHIP VIA:

CUSTOMER ORDER #: 3026

PST LICENCE: 6122-5207

PRODUCT	DESCRIPTION	1 SOLD	SHIP	PRICE	EXTENSION
6900-1Z	1 BALL BEARING	30	1	4.97	149.10
				6.S.T.	8.95

PACKING SLIP NO: 327152-0 \*\*

RECEIVED BY: *[Signature]*

1112020